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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/582,347	06/09/2006	Hideto Ogasawara	1000023-000109	4976

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EXAMINER
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SERGEANT, RABON A

ART UNIT	PAPER NUMBER
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1765

NOTIFICATION DATE	DELIVERY MODE
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09/29/2011

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ADIPFDD@bipc.com  
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<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/582,347	OGASAWARA, HIDETO	
	<b>Examiner</b>	<b>Art Unit</b>	
	Rabon Sergent	1765	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 16 February 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on \_\_\_\_; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 5) ☒ Claim(s) 2 and 4-11 is/are pending in the application.
- 5a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 6) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 7) ☒ Claim(s) 2 and 4-11 is/are rejected.
- 8) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 9) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 12) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. ____.                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/9/2010</u> .  | 6) <input type="checkbox"/> Other: ____.                          |

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1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 16, 2010 has been entered.
2. The Japanese Office Action document cited within the Information Disclosure Statement of June 9, 2010 has not been considered, because an English language translation or summary has not been provided.
3. Claims 2 and 4-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Applicants have failed to set forth a basis for the claimed mass percents of claim 2. It is unclear if the mass percent are based upon the resin composition or some other entity.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

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invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 2 and 4-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oka et al. (US 2004/0034152 A1) in view of Samuels ('164) or Leppard et al. (US 2003/0236327 A1).

Oka et al. teach a composition comprising (A) polyamide resin, (B) glass fibers, (C) white pigment, such as titanium dioxide, (D) UV stabilizers, such as benzophenone compounds and benzotriazole compounds, and (E) hindered amine compounds. See abstract; paragraphs [0026], [0033], and [0039]. For 100 pts of (A), there is between 20 and 50 parts of (B), and 5 and 100 parts of (C). Component (A) is the reaction product of terephthalic acid and aliphatic diamine. See paragraphs [0012], [0030], and [0035]. Regarding claim 4, the polyamide has an intrinsic viscosity as low as 0.6 dl/g and a melting point below 350°C. Regarding claim 5, the diamine is comprised of 1,6-hexanediamine, 1,10-decanediamine, 1,11-undecanediamine, and 1,12-dodecanediamine. See paragraphs [0016], [0010], [0018], [0025], and [0045]. Regarding claims 8 and 9, the composition is useful as a reflector plate in diodes. See paragraph [0049]. Regarding claim 10, although the claimed optical property is not explicitly disclosed by the prior art, one of ordinary skill would have reasonably expected the composition to exhibit the same properties as claimed since it is based on analogous reactants and fillers in overlapping amounts.

6. Oka et al. fail to disclose the use of ultraviolet absorbers and hindered amine compounds having the claimed mass reduction ratio and further fail to disclose the hindered amine compounds of claim 11; however, the combined use of ultraviolet absorbers and hindered amine compounds that correspond to those claimed within polyamides was known at the time of invention. Samuels disclose that polyamides may be stabilized by using a tris-aryl triazine light

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absorber that corresponds to that of the instant invention and an oligomeric, polymeric, or high molecular weight HALS that corresponds to that claimed. See column 2, lines 38-51; column 5, line 60; column 6, line 31; column 8, lines 65+; column 9, lines 1, 2, and 25-46, within Samuels. It is noted that the preferred HALS compounds of column 8, line 65+ and column 9, lines 1 and 2 encompass a compound set forth within claim 11. Furthermore, it is noted that the preferred triazine compound of column 9, lines 25-46 corresponds to applicants' disclosed compound within pages 13 and 25 of the specification, identified as TINUVIN 1577FF. Leppard et al. disclose polyamide articles employing a hydroxyphenyl triazine ultraviolet absorber that corresponds to that of the instant invention, wherein the composition preferably contains a sterically hindered amine as a further stabilizer. A specifically disclosed and preferred hindered amine corresponds to a compound set forth within claim 11. See abstract and paragraphs [0050], [0062], [0111], and [0117] within Leppard et al. The hydroxyphenyl triazine ultraviolet absorber within paragraph [0050] corresponds to aforementioned TINUVIN 1577FF. Therefore, though the secondary references fail to disclose the claimed heating mass reduction ratio, the position is taken that since the disclosed compounds correspond to those of the instant invention, they must also possess the claimed heating mass reduction ratio. A compound and its properties cannot be separated. Accordingly, the position is ultimately taken that since the combination of ultraviolet absorbers and hindered amine compounds that correspond to those claimed was specifically known to be useful within polyamides, it would have been *prima facie* obvious to utilize them within the polyamides of the primary reference. It has been held that it is *prima facie* obvious to use a known compound for its known function. *In re Linder*, 173 USPQ 356. *In re Dial et al.*, 140 USPQ 244.

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7. Claims 2 and 4-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2000-204244 in view of Oka et al. (US 2004/0034152 A1) and further in view of Samuels ('164) or Leppard et al. (US 2003/0236327 A1).

JP 2000-204244 teach a composition useful in the production of reflector plates comprising (A) polyamide resin, (B) glass fibers, (C) titanium oxide, (D) UV stabilizers, and (E) hindered amine. See abstract and paragraphs [0002]-[0026] of the translation. In particular, (A) is the reaction product of terephthalic acid and aliphatic diamine. For 100 pts of (A), there is between 0.1 and 120 parts of (B) + (C). Regarding claim 4, the polyamide has an intrinsic viscosity as low as 0.6 dl/g and a melting point below 350°C. See paragraphs 18 and 24. Regarding claim 5, the diamine is comprised of 1,6-hexanediamine, 1,10- decanediamine, 1,11- undecanediamine, and 1,12-dodecanediamine. See paragraph 10. Regarding claim 10, although the claimed optical property is not explicitly disclosed by the prior art, one of ordinary skill would have reasonably expected the composition to exhibit the same properties as claimed since it is based on analogous reactants and fillers in overlapping amounts.

8. However, the reference fails to list specific compounds for (D), fails to teach diode applications, and fails to adequately teach ranges of (B) and (C). Oka et al. also teach reflector plates based on a composition (A) polyamide resin, (B) glass fibers, (C) titanium oxide, (D) UV stabilizers, and (E) hindered amine wherein (A) is the reaction product of terephthalic acid and aliphatic diamine. Furthermore, (B) and (C) are present in amounts relative to 100 parts of (A) by 20-50 pbw and 5 to 100 pbw respectively. (D) is comprised of compounds such as benzophenone and benzotriazole, and the resulting reflector plate is useful in LED technology. Therefore, it would have been obvious to use the reflector plate of JP 2000-204244 in a LED

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since Oka et al. teach it is a suitable application for an analogous composition, and the *prima facie* case of obviousness rises from the expectation that compounds similar in structure will have similar properties. *In re Gyruik*, 596 F.2d 1012, 201 USPQ 552 (CCPA 1979).

Furthermore, it would have been obvious to utilize the amounts of (B) and (C) disclosed by Oka et al. within JP 2000-204244 since they are in particular preferred for reflector plate based polyamides.

9. JP 2000-204244 fails to disclose the use of ultraviolet absorbers and hindered amine compounds having the claimed mass reduction ratio and further fail to disclose the hindered amine compounds of claim 11; however, the combined use of ultraviolet absorbers and hindered amine compounds that correspond to those claimed within polyamides was known at the time of invention. Samuels disclose that polyamides may be stabilized by using a tris-aryl triazine light absorber that corresponds to that of the instant invention and an oligomeric, polymeric, or high molecular weight HALS that corresponds to that claimed. See column 2, lines 38-51; column 5, line 60; column 6, line 31; column 8, lines 65+; column 9, lines 1, 2, and 25-46, within Samuels. It is noted that the preferred HALS compounds of column 8, line 65+ and column 9, lines 1 and 2 encompass a compound set forth within claim 11. Furthermore, it is noted that the preferred triazine compound of column 9, lines 25-46 corresponds to applicants' disclosed compound within pages 13 and 25 of the specification, identified as TINUVIN 1577FF. Leppard et al. disclose polyamide articles employing a hydroxyphenyl triazine ultraviolet absorber that corresponds to that of the instant invention, wherein the composition preferably contains a sterically hindered amine as a further stabilizer. A specifically disclosed and preferred hindered amine corresponds to a compound set forth within claim 11. See abstract and paragraphs [0050],

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[0062], [0111], and [0117] within Leppard et al. The hydroxyphenyl triazine ultraviolet absorber within paragraph [0050] corresponds to aforementioned TINUVIN 1577FF. Therefore, though the tertiary references fail to disclose the claimed heating mass reduction ratio, the position is taken that since the disclosed compounds correspond to those of the instant invention, they must also possess the claimed heating mass reduction ratio. A compound and its properties cannot be separated. Accordingly, the position is ultimately taken that since the combination of ultraviolet absorbers and hindered amine compounds that correspond to those claimed was specifically known to be useful within polyamides, it would have been *prima facie* obvious to utilize them within the polyamides of the primary reference. It has been held that it is *prima facie* obvious to use a known compound for its known function. *In re Linder*, 173 USPQ 356. *In re Dial et al.*, 140 USPQ 244.

10. Claims 2 and 4-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 07-228776 in view of Oka et al. (US 2004/0034152 A1) and further in view of Samuels ('164) or Leppard et al. (US 2003/0236327 A1).

JP 07-228776 teaches a composition useful in the production of reflector plates comprising (A) polyamide resin, (B) glass fibers, (C) titanium oxide, (D) UV stabilizers, and (E) hindered amine, See abstract and paragraphs 8 and 23. In particular, (A) is the reaction product of terephthalic acid and aliphatic diamine. See paragraphs 7, 12, 16, and 42. Components (B) and (C) are each present relative to 100 parts by weight of (A) in amounts ranging from 5 to 150 and 0.5 to 50 respectively. See paragraphs 19-22. Regarding claim 4, the polyamide has an intrinsic viscosity as low as 0.6 dl/g and a melting point below 350°C. See paragraphs 16 and 42. Regarding claim 5, the diamine is comprised of 1,6-hexanediamine, 1,10- decanediamine, 1,11-



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undecanediamine, and 1,12-dodecanediamine. See paragraph 11. Regarding claim 10, although the claimed optical property is not explicitly disclosed by the prior art, one of ordinary skill would have reasonably expected the composition to exhibit the same properties as claimed since it is based on analogous reactants and fillers in overlapping amounts.

11. However, the reference fails to list specific compounds for (D), fails to teach diode applications, and fails to adequately teach ranges of (B) and (C). Oka et al. also teach reflector plates based on a composition (A) polyamide resin, (B) glass fibers, (C) titanium oxide, (D) UV stabilizers, and (E) hindered amine wherein (A) is the reaction product of terephthalic acid and aliphatic diamine. Furthermore, (B) and (C) are present in amounts relative to 100 parts of (A) by 20-50 pbw and 5 to 100 pbw respectively. (D) is comprised of compounds such as benzophenone and benzotriazole, and the resulting reflector plate is useful in LED technology. Therefore, it would have been obvious to use the reflector plate of JP 07-228776 in a LED since Oka et al. teach it is a suitable application for an analogous composition, and the *prima facie* case of obviousness rises from the expectation that compounds similar in structure will have similar properties. *In re Gyruik*, 596 F.2d 1012, 201 USPQ 552 (CCPA 1979). Furthermore, it would have been obvious to utilize the amounts of (B) and (C) disclosed by Oka et al. within JP 07-228776 since they are in particular preferred for reflector plate based polyamides.

12. JP 07-228776 fails to disclose the use of ultraviolet absorbers and hindered amine compounds having the claimed mass reduction ratio and further fail to disclose the hindered amine compounds of claim 11; however, the combined use of ultraviolet absorbers and hindered amine compounds that correspond to those claimed within polyamides was known at the time of invention. Samuels disclose that polyamides may be stabilized by using a tris-aryl triazine light

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absorber that corresponds to that of the instant invention and an oligomeric, polymeric, or high molecular weight HALS that corresponds to that claimed. See column 2, lines 38-51; column 5, line 60; column 6, line 31; column 8, lines 65+; column 9, lines 1, 2, and 25-46, within Samuels. It is noted that the preferred HALS compounds of column 8, line 65+ and column 9, lines 1 and 2 encompass a compound set forth within claim 11. Furthermore, it is noted that the preferred triazine compound of column 9, lines 25-46 corresponds to applicants' disclosed compound within pages 13 and 25 of the specification, identified as TINUVIN 1577FF. Leppard et al. disclose polyamide articles employing a hydroxyphenyl triazine ultraviolet absorber that corresponds to that of the instant invention, wherein the composition preferably contains a sterically hindered amine as a further stabilizer. A specifically disclosed and preferred hindered amine corresponds to a compound set forth within claim 11. See abstract and paragraphs [0050], [0062], [0111], and [0117] within Leppard et al. The hydroxyphenyl triazine ultraviolet absorber within paragraph [0050] corresponds to aforementioned TINUVIN 1577FF. Therefore, though the tertiary references fail to disclose the claimed heating mass reduction ratio, the position is taken that since the disclosed compounds correspond to those of the instant invention, they must also possess the claimed heating mass reduction ratio. A compound and its properties cannot be separated. Accordingly, the position is ultimately taken that since the combination of ultraviolet absorbers and hindered amine compounds that correspond to those claimed was specifically known to be useful within polyamides, it would have been *prima facie* obvious to utilize them within the polyamides of the primary reference. It has been held that it is *prima facie* obvious to use a known compound for its known function. *In re Linder*, 173 USPQ 356. *In re Dial et al.*, 140 USPQ 244.

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13. Applicants' response has been considered, and the prior art rejections have been modified accordingly. Applicants' criticisms of the primary references, specifically Oka et al., are not well taken. Despite applicants' arguments, it is not seen that the teachings of the Oka et al. reference essentially direct the skilled artisan to employ a single exemplified stabilizer. The examiner finds no compelling rationale why the broader teachings within paragraph [0039] should be ignored. Furthermore, given these teachings within paragraph [0039] and the fact that the reference employs titanium dioxide, applicants' argument concerning the technical literature within page 8 of the response is not seen to be particularly relevant or convincing.

Any inquiry concerning this communication should be directed to R. Sergent at telephone number (571)272-1079.

/Rabon Sergent/  
Primary Examiner, Art Unit 1765